Feb. 1, 2012 Robert Murphy Lecture 1 on Mises Money and Credit Chapters 1 & 2.

Origin of money: a. not invented b. Menger's Theory

Function vs. functions of money

IV. Objective Theory of Value

V. Modem Subjective Theory

a. no equality of value
b. Objective prices, subjective valuation
c. Ordinal vs. cardinal ranking

VI Does money "measure Price."

a. Limitation of Direct Exchange
b. Liquidation or saleability
c. Medium of Exchange

Money is a medium of exchange (almost)

Universally within a certain community.

Definition

5. Quality (not definition!) of a good medium of exchange

Divisibility

Durability

Convenient market value by weight

Mises' argues that the function of money is to serve as a medium of exchange. This subsumes of typical functions touted by other economists such as:
Store of value

Standard of deferred Payment

Unit of account

III Functions vs. Function of Money.

Adam Smith, Ricardo, Marx for Objective Theory of Value

Modern Subjectivive Theory of Value.

a. No equality of value.
b. 3 pears vs. 2 apples. Adam trades because he prefers 2 apples for three pears because there is no equality of value. Each guy values differently but the trade is precisely 1.5 pears as a price of an apple.
c. Subjective Value moves toward objective prices.

d. Cardinal numbers: 1, 325.33; PI
e. Ordinal numbers: 1st, 4th, 26th

We can rank our friends. It makes sense to say "Sally is a better friend than John."

Mises: Prices consist in money; money doesn't "measure" prices.

Aristotle: equality of value. Subjective value theory—conclude the opposite. The girl who has the apple prefers the pudding and vice-versa. They both walk away from the trade with more value. Objective theory of value says trade is equal.

Value is in the mind of the beholder in subjective value theory. Market price show the equality of value, but then why do people trade them.

Subjective valuation to objective prices.

Does Money measure prices? Prices consist in money; money doesn't really "measure" prices.

http://community.mises.org/danielsanchez/about/

http://community.mises.org/danielsanchez/study-guides/mises/tmc/chapter-2-on-the-measurement-of-value/

Chapter 1: The Function and Origin of Money

Is money not absurd? Daily we give up perfectly useful goods and services for the sake of little green pieces of paper. But it is not just the fiat paper money we are familiar with that can seem strange in this regard. Even commodity money can seem weird when you think about it. Why would people give up goods and services for little disks of silver and gold that they never actually used? Such disks are passed around via innumerable exchanges, perhaps never ultimately providing any ornamental or industrial services. What a bizarre custom!

It doesn't take an economist to see the social benefit of such an arrangement. And once everybody is already using money, each individual in accepting money would expect to benefit, confident that others too will accept the money. But how did it start? This is a question I asked myself even as a child. At the beginning of it all, it would seem that the first person who accepted money would have no such confidence in its future purchasing power. So why would he do it? It would seem to necessarily involve a private sacrifice for the sake of public gain.

To a certain stripe of thinker, compelling such sacrifices is the *raison d'etre* of the state. So to them, it is natural to think that the state must have first instituted money. Thus, the "*etatist*" theory of the origin of money was dominant through most of the history of economic thought.

The statists were wrong. But that was just one of the many problems with the sorry state of monetary theory up through the mid-19th century. The whole field was a hodge-podge of disjointed insights. Nobody knew how to integrate those insights into a system, much less how to integrate monetary theory with the rest of economics.

Carl Menger, founder of the Austrian School of Economics, started to unravel the mystery of money in the late 19th century. In the early 20th century, Ludwig von Mises finally unloosed the Gordian knot with *The Theory of Money and Credit* (1912), arguably the most important single advance in monetary theory in the history of economic thought. In that treatise, Mises erected a theory of money of astounding originality that was complete and internally integrated: as well as externally integrated with modern, subjectivist economics in general. With this book, Mises completed the victory of the "marginal revolution" by extending its conquest to the monetary realm. In doing so, Mises finally made economics whole. The following is a guide to chapter 1 of this epochal work.

Section 1

Money is defined by Mises later in chapter 1 as a "universally employed" medium of exchange. This differs from how Mises would define money in his 1949 treatise *Human Action*: as a "commonly used" medium of exchange.

Mises delimits the realm of money by indicating in which economic situations money would have a function, and in which economic situations money would not have a function.

Mises notes that there is no need for money in *autarky*. In autarky there is no division of labor among household units. Each household consumes only what it produces and only produces for its own consumption. In such conditions there is no exchange, and therefore no use for money.

Secondly, there is no need for money in *socialism*. In socialism there is a division of labor (however chaotic that division may be). However, since there is no private property, that also precludes the possibility of exchange, thereby eliminating any use for any medium of exchange. In his 1922 book, *Socialism*, Mises changes his mind on this matter. He states that, in socialism while money would have no role with regard to the means of production, it could still have a function with regard to consumers' goods.[1]

Thus money, according to Mises in 1912, is only useful under *capitalism*: the state of affairs in which means of production are privately owned. In capitalism, the function of money is to facilitate exchange by making *indirect exchange* possible.

Section 2

In Section 2, Mises explains how money comes to be. The development occurs through three steps.

Step 1: From Commodity to Medium of Exchange

Mises explains how a commodity becomes a medium of exchange on the market. Mises explains this process through hypothetical examples, using letter names (A, B, m, n, etc) for market participants and goods. Since these kinds of the examples can be hard to follow, I've created the following a 14-page comic-style illustration of the passage. Click below to to enlarge and view.

In sum, direct exchange (barter) requires a "double-coincidence of wants". For the shoemaker to get the dozen eggs that he wants in exchange for a pair of shoes, it is not enough that he prefers the eggs to the shoes. The chicken farmer must also happen to prefer the shoes to the eggs. A big problem is that such a "double-coincidence of wants" is rare; it would be quite a stroke of luck for the egg-craving shoemaker to come across a barefoot chicken-farmer. However, the individual can solve that problem by resorting to indirect exchange. For example, the shoemaker may notice that the chicken-farmer needs candlesticks, and the candlestick-maker needs shoes. He can then trade his pair of shoes for some candlesticks, and then trade those candlesticks for the dozen eggs.

But the solution of *ad hoc* indirect exchange is a very limited one. It would still take a huge amount of luck and alertness to be able to find someone offering something the chicken-farmer wants and who also wants shoes. Chances are that the best series of exchanges that would get the shoemaker his eggs would be a lot longer. Perhaps he would need to trade shoes for rope, and then rope for timber, and then timber for fish, and then fish for candlesticks, and then candlesticks for eggs. And what about all the other goods the shoemaker wants? Many of those very well may each involve the same logistical nightmare.

Mises notes that, "[i]ndirect exchange becomes more necessary as division of labor increases and wants become more refined." The more people specialize, the less likely it is that any individual can acquire the various things he wants in exchange for the niche product that he brings to market.

Step 2: From Medium of Exchange to Common Medium of Exchange

After thus explaining how a commodity becomes a medium of exchange, Mises then explains how a medium of exchange becomes a common medium of exchange.

Whether a good arises as a common medium of exchange hinges on its *marketability*. For "marketability" Menger used the term "saleability", which he defined as the "facility with which [a good] can be disposed of at a market at any convenient time at current purchasing prices, or with less or more diminution of the same". Menger uses the example of grain as a good with high marketability and an astronomical instrument as a good with low marketability. In his article "The Origin of Money and Its Value", Austrian economist Robert Murphy explains the example very clearly:

For example, someone selling wheat is in a much stronger position than someone selling astronomical instruments. The former commodity is more saleable than the latter.

Notice that Menger is not claiming that the owner of a telescope will be unable to sell it. If the seller sets his asking price (in terms of other goods) low enough, someone will buy it. The point is that the seller of a telescope will only be able to receive its true "economic price" if he devotes a long time to searching for buyers. The seller of wheat, in contrast, would not have to look very hard to find the best deal that he is likely to get for his wares.

(…) we might find that one telescope trades against 1,000 units of wheat. But Menger's insight is that this fact does not really mean that someone going to market with a telescope can instantly walk away with 1,000 units of wheat.

Moreover, it is simply not the case that the owner of a telescope is in the same position as the owner of 1,000 units of wheat when each enters the market. Because the telescope is much less saleable, its owner will be at a disadvantage when trying to acquire his desired goods from other sellers.

Because of a recognition of this disadvantage, vendors of less marketable (saleable) goods will generally trade for more marketable goods before they enter the market for the things they want to use themselves. Since marketability, according to Mises, is a function of how "general and constant" the demand for the good is, this sets off an upward spiral of marketability for some goods: their high marketability draws more demand, which increases their marketability, which draws forth still more demand, and so on. This continues until a few goods are selected as "common media of exchange".

Step 3: From Common Medium of Exchange to Money

Yet the selection process does not stop there. Naturally, individuals will want to trade their goods for the *most* marketable of these common media of exchange. As consensus grows as to which common medium is the most marketable, the upward spiral of marketability will tend to benefit only that medium, at the expense of others. Thus do inferior common media of exchange tend to drop out of the market entirely, and a single medium becomes universally used: in other words, becomes money.

Mises then explains how through the process of what is now called "globalization", moneys tend to die out as markets merge and competition begins anew among the moneys of the various markets. This process leads toward the establishment of a single money for the whole world.

In an interesting incidental passage, Mises seems to endorse state-enforced "monometallism".

Section 3

In section 3, Mises explains how the alleged "secondary functions" of money, which many theorists write about, are really just instances of its primary and sole function: to facilitate exchange by making indirect exchange possible.

The facilitation of credit transactions is not a separate function, as is often supposed, because credit transactions are simply exchanges of present goods for future goods. Let us say a would-be lender who has produced present goods and services would like to acquire a claim to a greater amount of future goods and services. However borrowers on the market are not likely to be interested in the specific goods and services he has produced. So the lender facilitates future exchange by exchanging his goods and services for present money, which borrowers on the market *will* likely desire.

The transmission of value across space is not a separate function either. Exchanging "a good here" for money, in order to exchange money for "a good there" is, again, simply another instance of acquiring a good via indirect exchange, which would have been impossible to acquire via direct exchange.

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A common misconception is that the Mengerian market process theory of the origin of money praxeologically disproved the etatist theory. But, as Mises stated in *Human Action*, chapter 17, it is for history, not economics, to disprove the etatist theory. However unlikely it is that once upon a time a king or parliament invented money, it is not praxeologically impossible.

The unlikelihood is indeed staggering however. Murphy sums up the problems with the notion that a wise ruler foresaw the benefits of a money economy and imposed it by law upon his subjects:

First, as Menger pointed out, we have no historical record of such an important event, even though money was used in all ancient civilizations. Second, there's the unlikelihood that someone could have invented the idea of money without ever experiencing it. And third, even if we did stipulate that a ruler could have discovered the idea of money while living in a state of barter, it would not be sufficient for him to simply designate the money good. He would also have to specify the precise exchange ratios between the newly defined money and all other goods. Otherwise, the people under his rule could evade his order to use the newfangled "money" by charging ridiculously high prices in terms of that good.

Money did in fact arise. So if the extremely unlikely etatist story did not occur, money must have arisen in some other way. And the market process of the Mengerian theory is the only other candidate. Moreover, that market process is the necessary outcome of certain assumed conditions (i.e. scarce double-coincidences of wants, varied marketability of goods, etc) that conspicuously match the real world. So while the economist *qua* economist must remain dutifully silent on the question, the economic historian must conclude that that is indeed how money originated in the real world.

No state enforcement is required to institute money by compelling private sacrifice for a public gain. The emergence of money need not involve such selflessness in the first place. As Mises tells the story of the origin of money, the economic actor benefits at each step of the way: when he first resorts to indirect exchange, when he first uses a common medium of exchange, and when he first accepts money for his wares.

The market process origin of money is often characterized as a "spontaneous order", as against the "deliberate order" of the etatist theory. But that should never obscure the fact that each step of the way in the market process origin of money is, as in all economic phenomena, a deliberate action undertaken by an individual to improve his state of affairs.

[1]"…in the socialist commonwealth, exchange itself has a much narrower significance, since it is confined to consumers' goods only."; Ludwig von Mises; *Socialism: An Economic and Sociological Analysis*, Part 2, Chapter 7.

Chapter 2: On the Measurement of Value

In chapter 1 of *The Theory of Money and Credit*, Mises explained what money *is* (a universally, or at least commonly, used medium of exchange). In chapter 2, Mises explains what money is *not*. Contrary to the common fallacy, **it is *not* a measure of value.**

The notion of money as a measure of value as an artifact of the value theory of the "older political economy". By this he means the "classical economics" of Adam Smith, David Ricardo, and John Stuart Mill. The classical economists by and large believed that the value of a good was an objective attribute of the good itself. Economic actors, according to classical theory, exchanged goods if the respective values of the goods were equal (a fallacy that goes back to Aristotle[1]). And how do economic actors determine if an objective attribute of one thing is equal to the same objective attribute of another thing? Well, how do you determine equality between other objective attributes (like length, weight, volume, temperature, etc)? You measure, of course! And assuming value is an objective quantitative attribute, it would seem that the best unit of its measurement would be the money unit.

However, the classical economists were entirely backwards in their value theory. Therefore, their conception of money as a measure of value (derived, as it was, from their value theory) was equally backwards. Classical value theory was finally supplanted by what Mises calls "modern value theory" in the late 19th century. By this, Mises means the *subjective marginal utility* theory of value. To understand Mises' monetary theory, it is necessary to understand subjective marginal utility. To come to do so, please read the following three comics.

According to modern value theory, then, value is derived from utility. Valuation is a matter of preferring one good over another according to the goods' respective marginal utilities. When you prefer one thing to another, you give the goods a sort of rank order. Therefore "ordinal numbers" (1st, 2nd, etc) can be applied to the valuation of goods. For example, you can say that, in order of your preference, a plum is 1st, an apple is 2nd, and an orange is 3rd. But preferring is not measuring. Therefore, "cardinal numbers" (1, 2, 3 1/3, 4.5 etc) cannot be applied to the valuation of goods.

While, after the advent of modern value theory, most economists accepted that valuation is not objective, and thus not cardinal, they just could not let go of cardinality altogether. Cardinality is necessary for the use of measurement and mathematics, and according to the prejudice of many thinkers, "science is measurement"[2]. Value could not be cardinal, because it is a subjective preference based on utility. But maybe utility itself could be thought of as cardinal!

Even one of the greatest pioneers of modern value theory (and Mises' teacher) Eugen von Bohm-Bawerk tried to bring cardinality back in in this manner. However, instead of formulating measurable utility, Bohm-Bawerk formulated measurable satisfaction. (The two notions are closely related; the "utility" of a good is the good's "causal relevance" for the satisfaction of desire.) Irving Fisher, on the other hand, *did* try to conceive of a way to measure utility itself. The following comic illustrates how how Mises, in this chapter, endeavors to correct Bohm-Bawerk and Fisher by showing that both attempts directly contravene the law of dimishing marginal utility (see the previous slideshow). Mises nicely summed up the core of why any idea of measuring utility is fallacious in *Economic Calculation in the Socialist Commonwealth*:

"Marginal utility does not posit any unit of value, since it is obvious that the value of two units of a given stock is necessarily greater than, but less than double, the value of a single unit."

He never quite explicitly spells that argument out in Theory of Money and Credit. For the most part, he just states that the law of marginal utility precludes measuring utility, and assumes his target audience (other economists)

should be able to see why that is so at once. However, that will leave most readers these days bewildered, so I hope the following comic helps in that regard.

Mises then goes on to counter Joseph Schumpeter's attempt to quantify satisfaction. He does so by pointing out that Schumpeter assumes that valuation must be preceded by some prior measuring process. But simple reflection demonstrates that, we are perfectly capable of looking at an apple and an orange and simply selecting one based on a direct comparison of the two choices. We do not need to infer any intermediary quantities, and then decide based on an arithmetic comparison of those two quantities.

In Section 2, Mises argues that since value cannot be quantified, neither can values be summed up to infer the "total value" of a collection of goods.

In Section 3, brings money back into the picture. Money is not a measure of value, because valuation is a process of prioritization, not of measurement. When a man buys a newspaper for a 25 cents, he is not really demonstrating that 25 cents is the measure of its value to him. He is demonstrating the he values the newspaper over 25 cents. Furthermore he values the newspaper over 24 cents, 23 cents, etc. And he may value the newspaper over 26 cents as well. And presumably, there is a certain number of cents above which he values the money over the newspaper. Strictly speaking, when a newspaper is purchased for 25 cents, 25 cents is the newspaper's *price*, not its value.

Money, however, does introduce arithmetic into economic affairs in an important way. While money does not measure value, money prices can quantitatively *express* value in a commensurable way. This makes **economic calculation** (which is the hallmark of the market economy) possible. However economic calculation, while closely related to it, is outside the theory of money and indirect exchange, and thus it must be covered in a future article.

[1]Murray N. Rothbard, *It All Began, As Usual, with the Greeks* (excerpted from *An Austrian Perspective on the History of Economic Thought*), Section 1.8

[2]This being the original motto of the Econometric Society. See Murray N. Rothbard; *The Mantle of Science*.